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SYSTEM IN COLLECTING.

When the budding entomologist first makes up his mind to sally forth in quest of insects, his first thought is to equip himself with a net and a cyanide-bottle; then he procures pins, setting-boards and boxes, and before long he has a "collection."

Now if his sole object is innocent and healthful recreation, no doubt this object is thus to be attained. But if his aims are higher, if he wishes to benefit the science of which he is a votary, and if he desires his work to be helpful to his fellow-workers, he must do more than this.

He may have a well-arranged and extensive collection—he may possess many rare or even undescribed species, but his energy will be wasted if he does not study them, and above all keep records of his work upon a definite system.

In advocating this I would like strongly to insist upon two points—first, the use of labels, and second that of note-books.

To a man studying insects a specimen without a label is of little or no use. For example: A specimen of the eastern butterfly, *Vanessa huntera*, is in itself of no great interest, while the same insect with a B. C. label would be of tenfold value in indicating the distribution of that species. Again, in studying the habits of an injurious insect, the date of capture is most important, as evidence on the question whether it is double-brooded, and whether it hibernates in the imago form or otherwise.

Let me then urge all collectors never to place a specimen in their collections without a clearly-written or printed label indicating the locality and date of capture; the collector's name may be added if desired.

The use of a note-book is of even greater importance than the use of labels. Herein we can permanently record not only the capture of those insects which are in our collections—and which may some day be useless from grease or attacks of vermin, or exchanged with other collectors—but also the occurrence of insects seen by us but not actually taken—or at least not kept—and of insects taken by other collectors while in our company.

Moreover we must needs capture a number of insects to which we cannot at once assign names. These being sent away for determination may pass out of our possession; but if our note-book records the capture, with a brief description of the unknown insect, we may expect more easily to take other specimens, and more readily to identify them when taken.

No doubt each collector will evolve for himself a system of note-taking; my own is as follows:

Each order, or family in some cases, has a certain number of pages allotted to it. Each species is put down as it turns up, the name, when known, being followed by the date and locality in an abbreviated form. Every subsequent record of that species is noted on the same page, the name of the species thus needing only to be written once.

Where the species is unknown, a number occupies the place of the name, and in a different part of the book the number is again inserted, followed by a brief description of the insect, and giving its family, and genus, so far as our knowledge can ascertain them.

Then, when the name is ultimately obtained, it is written in over or after the number, and the record is as complete as if we had known the name from the first.

Now all this implies work no doubt, but I have made it clear, I hope, that it is work well worth doing, and that it will amply repay the worker for his pains. If all our collectors kept faithful records for a year or two, we should have a B. C. list of insects that any Province or State would find it hard to equal.

NEW BOOK.

"*Butterflies of the West Coast*," by W. G. Wright. Published by the Whitaker Ray Co., San Francisco. Price \$4.00.

This fine book will be indispensable to all students of Western Lepidoptera, including, as it does, a large number of species omitted in Dr. Holland's work. In general execution of the coloured plates, it is quite equal to either the *Butterfly Book* or the *Moth Book*. The figures are arranged more systematically on the plates, and the

numbers of the figures are plainly given before each name in the text. As the number of species figured is comparatively small, the plates give nearly always the male, female and under-side, besides many varieties and aberrations.

Most of our B. C. butterflies are here, but about a dozen are missing, including such well-known insects as *Vanessa j-album*, *Erebia vidleri*, *Pamphila mandan*, *Thanaos icelus*, and others.

In the text of the work we find, as the natural result of twenty-five years' work, a mass of interesting information from the author's personal observations of the life-history, habits and distribution of the species he mentions.

Many of his conclusions will be strongly disputed, and we venture to doubt the accuracy of some of his determinations.

For example, fig. 112 is our *Argynnis bremnerii* without a doubt; fig. 119 is a specimen of *A. rhodope*. Fig. 199 is surely not *Phyciodes tharos*? It seems to be the same as fig. 206 on the same page, which is called *P. picta*. Fig. 198 is what we have been calling *P. tharos*, following Dr. Holland's illustrations, but Mr. Wright describes it as a new species, *P. pascoensis*. Figs. 358, 359 are probably both incorrectly named. Fig. 140 is very unlike our specimens, nor does it resemble Dr. Holland's figure or *A. eurynome*. Possibly it is var. *clio*. Among the *Hesperiidae*, several of his species are represented in the plates by two males, not male and female, as the text indicates.

The plates of *Melitaea* and *Phyciodes* are particularly clear and good.

INTERESTING CAPTURES.

- 239 *Basilarchia archippus* Cram. Several at St. Leon Hot Springs, Arrow Lake, August, 1905. Determined by Dr. Fletcher for Mr. Dashwood-Jones.
- 420 *Nomiades lygdamus* Dbloy. Kootenay Lake, Aug., 1905; determined by Dr. Fletcher for Mr. Dashwood-Jones.
- 905 *Ammalo tenera* Hbn. Vernon; determined by Dr. Fletcher for Mr. E. P. Venables.
- 1395 *Rhynchagrotis placida* Grt. Vancouver, Sept., 1903; determined by Dr. Smith for Mr. A. H. Bush.
- 1477 *Noctua esurialis* Grote. Vancouver, July, 1905; determined as typical by Dr. Smith for Mr. A. H. Bush.
- 1579 *Paragrotis plagigera* Morr. Spatsum; July, 1903; determined by Dr. Smith for Mr. A. H. Bush.
- 1700 *Paragrotis reuda* Streck. Vancouver, July, 1905; determined by Dr. Fletcher for Mr. A. H. Bush.
- 2147 *Bellura gortynides* Walk. Only one previous record. Vancouver, July 9th, 1905; determined by R. V. Harvey for Mr. A. H. Bush.
- 2492a *Autographa pseudogamma* Grit. A very fine specimen from Stikine River, August, 1904. Determined by Dr. Fletcher for Mr. T. Wilson.
- 2854 *Catocala briseis* Edw. Arrow Lake, Aug., 1905. Determined by Dr. Fletcher for Mr. Dashwood-Jones.
- 3006 *Erebus odora* Linn. One very dark specimen from St. Leon Hot Springs, Arrow Lake, Aug., 1905. Determined by Dr. Fletcher for Mr. Dashwood-Jones.
- 3638 *Deilinia behrensaria* Hlst. Vancouver, July 24th, 1905. (New locality); determined by Rev. G. W. Taylor for Mr. A. H. Bush. Also a specimen from New Westminster (Dashwood-Jones).
- 1 *Parnassius clodius* Men. Recorded from Greenwood by Mrs. Nicoll. The only record east of Mt. Cheam.

THE SPRING MEETING.

This meeting was held at Duncans, on Thursday, April 19th. The chair was taken by the President, Rev. G. W. Taylor, F.R.S.C., and six other members were present. The President called attention to the fact that this was the first meeting to be held at Duncans, and expressed his conviction that some good work would be done at that place, now that five of our members reside in the district.

Mr. R. V. Harvey then read a paper on "The distribution of Insects in Western N. A.," in which he endeavoured to account for the similarity between our fauna and that of Europe, with notes on some species, chiefly *Syrphidae*, described from the White Mountains of New Hampshire, and recently recorded from B. C. A vote of thanks was passed to Mr. Harvey for his paper.

Messrs. Wolley-Dod, of Calgary, G. O. Day, of Duncans, and T. M. English of Cowichan, were elected members.

Mr. E. M. Skinner showed some interesting insects from the Skeena River, including a fine *Hepialid*, *Sthenopsis (quadrimaculatus)*. Mr. Livingstone showed some uncommon *Geometers* and other *Lepidoptera*. The rest of the evening was spent in examining the fine collections of Mr. A. W. Hanham, to whose hospitality we were indebted.

OCCASIONAL NOTES.

Our President travelled to Ottawa on the 17th of May, where he read a paper before the Royal Society of Canada on the Geometrid Moths of British Columbia, with descriptions of a number of new species. This paper will be printed in the Transactions of the above Society, with a coloured plate of the species described.

Congratulations have been received from many quarters on the appearance of our first number, and we hope that the hearty co-operation of all the members will enable us to maintain a high standard in subsequent issues.

Our "Notes on the Season of 1906" are not so full as we should like to see them. As our next number appears in September, after the best of the collecting is over, we hope the members will keep notes of the good things they get as they go along, so that we can have a complete list, so far as the material is identified at the time.

Messrs. Sherman and Harvey have planned an expedition for the early part of July over the Hope Trail into the Similkameen country, where they expect to do some interesting collecting in various orders.

NOTES ON THE SEASON OF 1906.

VANCOUVER.—The spring was unusually dry, the March rainfall being only 2 1-4 inches, but a late frost in the middle of the month set things back considerably. Sallows were in bloom by the end of February, and produced noctuids up to more than six weeks later. Nine species of Noctuidae were thus taken in March, among the less common being *Xylina innominata* and *Calocampa nupera* (Sherman & Harvey). In April *Hypena decorata* was taken on the 5th, (Harvey), while *Xylomiges perlubens* was beaten in some numbers from cherry by Draper. About Easter *Thecla nelsonii* (if the name is correct) was fairly common. *Lepisesia ulalume* appeared at the cherry-trees on April 13th, and several have been taken since; (Bush & Draper). The two *Deilephilas*, *lineata* and *galli*, were seen in May at flowers *Hyphantra textor*, the Fall Web-worm, which has been rare of late years, was captured May 11th (Harvey). Of Geometers *Brephos infans* was seen on March 7th by Mr. Bush, and later a specimen was taken by Mr. Sherman.

In Coleoptera Mr. Sherman took *Dendroides canadensis* on April 7th, and Mr. Harvey's captures at Vancouver include the following;—*Staphylinus badipes*, two specimens, April 8th and 14th; *S. rutilicauda*, one May 19th, from a rotten log; *Coccinella sanguinea*, several in April and May; *Adalia bipunctata*, a pair in cop; on a plum-tree May 19th; *Areopus monachus*, several on April 28th; *Limonius subauratus*, two, May 4th and 13th; *Corymbites suckleyi*, April 19th; *C. cruciatus*, May 13th; *Halitica bimarginata*, April 14th.

In Diptera 42 species were taken in April, of which 26 were Syrphidae, including several species new to our list but not yet determined. Mr. Sherman took *Crioprora alopex* on March 24th, *Sphecomyla pattoni* on April 28th, *Myopa plebeia* on April 7th, and an uncommon Stratiomyid, *Sargus viridis*, on April 28th.

VICTORIA.—Mr. E. M. Anderson spent part of May in the Clayoquot district, but reports Lepidoptera scarce; *Incisalia iroides* was noted, and *Alcis imitata* a very common Geometer. At Victoria *Lemonias taylori* was abundant from March 6th to 12th about Beacon Hill Park, and the larvae were taken in some numbers from wild hyacinth, as early as March 7th.

KASLO.—Mr. Cockle reports *Lepisesia ulalume* early this year and abundant at cherry blossom. Among Noctuids he notes:—*Pleroma obliquata*, two at light, April 16th; *Xylina fagina*, one at light, April 11th; *Meliopotis versabilis*, two at light, May 1st and 29th. Geometers; *Philobia enotata*, May 3rd; *Coryphista meadii*, May 11th.

VERNON.—Mr. Venables writes that he has taken a number of specimens of the rare Sphingid, *Lepisesia clarkiae*, about the end of April.

(I note that the insect going by this name in our collections resembles the figure of *L. juanita* in Holland's Moth Book much more than that of *L. clarkiae*.)

WELLINGTON.—Mr. Taylor has taken five species of Sphingids in his garden on one day, including the two *Deilephilas*, *L. ulamune*, *Sphinx vancouverensis* and *Hemaris rubens* (thetis). Cherry and willow produced, among other Noctuids, *Xylina amanda*, April 17th; *Xylomiges perlubens*, April 16th.

Of Geometers the following are worth recording; *Nyctobia nigroangulata*, April 17th; *Hydriomena menzanita*, April 16th; *Jubarella danbyi*, two at willow blossom, April 20th.

DUNCANS.—No records have been received as yet, but Messrs. Taylor and Harvey collected, on April 19th, some Coleoptera, including *Cychrus angulatus*.

THE BRITISH COLUMBIA LIST.

Coleoptera. Family Buprestidae.

The Buprestids are rather long and narrow beetles, often metallic in colour, and are found upon flowers or basking in the sun. The larvae are known as "flatheaded borers," and attack orchard and other trees by boring in the wood. Some of the eastern species of *Agilus* cause galls on raspberry and blackberry canes. Our species of Buprestis are very handsome insects, being adorned with bright metallic green and copper.

Chalcophora, Sol.

- 4568 *angulicollis* Lec. Victoria, Wellington, New Westminster.

Dicerca, Esch.

- 4576 *prolongata* Lec. Victoria.
4583 *tenebrosa* Kby. Wellington, Vernon.
4587 *sexualis* Cr. Vancouver.

Buprestis, Linn.

- 4606 *maculiventris* Say. Common everywhere.
b. *var. rusticorum* Kby. Vernon.
4607a *langii* Mann. Generally distributed.
4610 *lauta* Lec. Victoria, Wellington, Vancouver, Vernon.
4611 *adjecta* Lec. Shawnigan, Wellington.

Melanophila, Esch.

- 4619 *longipes* Say. Wellington, Vancouver.
4621 *drummondi* Kby. Vancouver Island and Mainland.
4623 *gentilis* Lec. Wellington.

Anthaxia, Esch.

- 4628 *aeneogaster* Lap. Wellington, Vancouver.

Chrysobothris, Esch.

- 10076 *caurina* Horn. Wellington.
4650 *trinervia* Kby.
4646 *carinipennis* Lec. "B. C." (Evans).

Acmaeodera, Esch.

- 4697 *variegata* Lec. Vernon.

Chrysophana, Lec.

- 4716 *placida* Lec. Wellington, Vernon.

Agrilus, Steph.

- 4742 *politus* Say. Wellington.

DIPTERA. FAMILY BOMBYLIIDAE.

These are the bee-flies, so called from being more or less clothed with long whitish hairs, giving them a close resemblance to bees. They hover over flowers, and are fond of alighting on bare spots in the sunshine. Most of the larvae are parasitic, some on lepidopterous larvae, others on grasshoppers or bees. On the whole they may be regarded as beneficial.

Spogostylum, Macq.

- analis* Say. Mission Junction.
melanopogon Bigot. Vancouver.
oedipus Fabr. Generally distributed.
pauper Loew. Vancouver Island.

Exoprosopa, Macq.

- dorcadion* O. S. (*capucina* Fab.) Vancouver Island.

Dipalta, O. S.

- serpentina* O. S. Wellington.

Anthrax, Scopoli.

- agrippina* O. S. Generally distributed.
alternata Say. Victoria.
fulviana Say. Victoria, Vancouver.
eumenes O. S. Victoria.
harveyi Hine. Mt. Cheam.
lateralis Say. Generally distributed.
lucifer Fabr. Vernon.
seminigra Loew (*morio* L.) Generally distributed.
sinuosa Wied. Vancouver Island.

Bombylius, Linn.

- lucifer* O. S. Okanagan Lake.
major Linn. Abundant everywhere.

Systoechus, Loew.

- candidulus* Loew. Victoria, Vernon, Mt. Cheam.
oreas O. S. Victoria.

Eclimus, Loew.

- auratus* Will. Victoria.
lucifer O. S. "Vancouver Island" - (Aldrich; Catalogue)
magnus O. S. "Vancouver Island" - (Aldrich; Catalogue)

Aphoebantus, Loew.

- hirtus* Coq. Goldstream.

FAMILY THEREVIDAE.

The "stiletto flies," having a slender pointed abdomen. They are like robberflies, but have quite slender legs. We have but one species.

Thereva, Latr.

- frontalis* Say. Vancouver.

NOTE. Records are requested for subsequent issues in the families: Asilidae, Tabanidae and Stratiomyidae.



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